

Amendments to the Specification:

Please replace the paragraph beginning on page 5, line 4 with the following amended paragraph (third amendment to this paragraph):

The body may be surrounded by external, functional components such as differential pressure sources, electro-motive sources, heaters, light sources, and optical detectors. In the preferred embodiment, the reaction chamber is an amplification chamber for amplifying nucleic acid in the sample. Also in the preferred embodiment, the separation region comprises a separation channel, e.g., an electrophoresis column or capillary containing a suitable matrix material, such as electrophoresis gel or buffer, for separating nucleic acid fragments in the sample. In one embodiment, the device further includes at least two electrodes coupled to the body, the electrodes being positioned to ~~induce the sample components to separate into bands~~ drive electrophoretic, electroosmotic, or IEF flow in the separation channel when a voltage difference is applied between the electrodes.